



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,925	12/26/2001	Luc Beaudoin	00430-0009	7638
34645	7590	08/08/2006	EXAMINER	
JOHN C. GORECKI, ESQ. P.O BOX 553 CARLISLE, MA 01741			TAN, ALVIN H	
			ART UNIT	PAPER NUMBER
			2173	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/025,925	<b>Applicant(s)</b> BEAUDOIN ET AL.	
	<b>Examiner</b> Alvin H. Tan	<b>Art Unit</b> 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/12/06</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Remarks***

1. Claims 21-46 have been examined and rejected. This Office action is responsive to the amendment filed on 5/12/06 which has been entered in the above identified application.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21-42, 44, and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker et al (March 1995).

### **Claims 21-34**

4-1. Regarding claim 21, Becker anticipates the claim of a method comprising the steps of presenting a background image representation of at least a first of the aspects of the telecommunication network, said first aspect being a physical network topology of the telecommunication network, by teaching a graphical tool called SeeNet, that visualizes network data using static displays, interactive controls, and animation

*[Section I, page 16, paragraph 7, lines 1-3]. [Figure 7] shows the percentage of idle network capacity into and out of one node near Chicago using SeeNet. As shown, a map of the U.S is displayed in the background along with nodes and links on the map.*

Becker teaches presenting a foreground representation of at least a second of the aspects of the telecommunication network over the background image representation, by disclosing that in addition, links with a high percentage of idle capacity (red) are shown above those with a lower percentage of idle capacity. Hence, the higher percentage links are shown in the foreground, and the lower percentage ones, in the background. The user is allowed to adjust the colors representing the links on the display and thus, would have the ability to choose which links would be in the foreground *[Section III, page 20, paragraph 4].*

Becker teaches said second of the aspects comprising at least a management view of the telecommunication network, by disclosing that users can select specific nodes for viewing as well as choose which links would be in the foreground *[Section III, page 20, paragraphs 4, 6].* Thus, the foreground image representation comprises a management view where users can manage the nodes and links being viewed.

4-2. Regarding claim 22, Becker anticipates the claim of the method wherein the background image representation is generated from an information set associated with the telecommunication network such that the background image representation contains less than a complete visual representation of the telecommunications network topology,

Art Unit: 2173

by teaching that the background links only represent a portion of the network data that fall within a certain range, as shown by its color *[figure 7]*.

4-3. Regarding claim 23, Becker anticipates the claim of the method wherein the background image representation is a combination of a plurality of unselected views of the telecommunication network and wherein the foreground image representation further comprises at least one selected view of the telecommunication network, by teaching that the background map and links represent the background views and the links having the prominent user selected color represent the foreground view.

4-4. Regarding claim 24, Becker anticipates the claim of the method wherein the step of presenting the foreground image representation comprises displaying the at least one selected view in a distinguishable fashion from the combination of unselected network views forming the background image representation to enable the at least one selected view of the telecommunication network to be viewed in context of information contained in the background image representation, by teaching that the foreground links have a distinct color. In the case of *[figure 7]*, the color is red.

4-5. Regarding claim 25, Becker anticipates the claim of the method further comprising the step of moving at least one of the unselected views of the telecommunication network from at least one of the background image representation to the foreground image representation, and the step of moving at least one of the

Art Unit: 2173

selected views of the telecommunication network from the foreground image representation to the background image representation, by teaching that the user can adjust the color as well as the levels of color being displayed *[Section III, pages 19-20]*. This would allow the user to modify which links are in the background and foreground.

4-6. Regarding claim 26, Becker anticipates the method wherein the step of moving is performed upon receipt of input from a user of a network management tool, by teaching that SeeNet allows a user to modify the parameters while continuously providing visual feedback, enabling the adjustment of the parameters to produce informative displays *[Section IV, paragraph 1]*.

4-7. Regarding claim 27, Becker anticipates the method wherein the background image representation is a reference view of a base model representation and wherein the foreground image representation is an overlay view of the base model representation, by teaching that the map is a reference view and the links are overlaid on top of the map *[figure 7]*.

4-8. Regarding claim 28, Becker anticipates the method wherein the background image representation is grayed out relative to the foreground image representation, by teaching that the links having the lowest percentage of idle capacity in *[figure 7]* are shown in gray.

Art Unit: 2173

4-9. Regarding claim 29, Becker anticipates the claim of the method further comprising the step of presenting at least one user-selected logical network topology, by disclosing that the display contains user-selectable links and nodes on a map *[figure 7]*.

4-10. Regarding claim 30, Becker anticipates the claim of the method wherein the background image representation and foreground image representation allow simultaneous displays of representations of multiple network technologies available on the telecommunication network, by teaching a statistic may be raw data or summaries. Link statistics may be directed, as in call flow of a circuit-switched network, or undirected, as in the network's capacity *[Section I, page 16, paragraph 4]*.

4-11. Regarding claim 31, Becker anticipates the claim of the method further comprising the step of enabling a combination of the background and foreground images to be visible via a Graphical User Interface (GUI) of a network management tool *[figure 7]*.

4-12. Regarding claim 32, Becker anticipates the claim of the method wherein the first aspects and second aspect are user selectable from the plurality of aspects of the telecommunication network via the GUI, by teaching that the user may vary the statistic, levels, geography, topography, time, aggregation, and color parameters of the display *[Section III, page 19-20]*.

4-13. Regarding claim 33, Becker anticipates the claim of the method wherein the first aspect represents physical devices in the telecommunication network and wherein the second aspect represents attributes of the physical devices, by teaching the topology parameter *[Section III, page 19]* and that network data may be categorical, such as the type of node or link, or quantitative, such as a link's capacity *[Section I, page 16, paragraph 4]*.

4-14. Regarding claim 34, Becker anticipates the claim of the method wherein the foreground image representation is a composite of multiple individual representation of one or more of the aspects of the telecommunication network, by teaching that the display shows multiple nodes on a map with links interconnecting them *[figure 7]*. The multiple nodes represent the one or more aspects of the telecommunication network.

#### **Claims 35-42**

4-15. Regarding claim 35, Becker anticipates the claim of a network management tool comprising a Graphical User Interface available via a window on a display, said user interface being configured to provide the network manager with an ability to simultaneously display a reference view of a managed telecommunication network, said reference view describing at least a portion of a physical network topology of the managed telecommunication network, by teaching a graphical tool called SeeNet, that visualizes network data using static displays, interactive controls, and animation



Art Unit: 2173

*[Section I, page 16, paragraph 7, lines 1-3]. [Figure 7]* shows the percentage of idle network capacity into and out of one node near Chicago using SeeNet. As shown, a map of the U.S is displayed in the background along with nodes and links on the map.

Becker teaches an overlay view of the managed telecommunication network in a distinguishable fashion in said window, by teaching that in addition, links with a high percentage of idle capacity (red) are shown above those with a lower percentage of idle capacity. The links with the higher percentage are overlaid on top of the map as well as the links with the lower capacity. The user has the ability to adjust which links are displayed by varying the parameters *[Section III, pages 19-20]*.

Becker teaches said user-selectable overlay view describing at least a management view of the managed telecommunication network, by disclosing that users can select specific nodes for viewing as well as choose which links would be in the foreground *[Section III, page 20, paragraphs 4, 6]*. Thus, the foreground image representation comprises a management view where users can manage the nodes and links being viewed.

4-16. Regarding claim 36, Becker anticipates the claim of the tool wherein the reference view and overlay view together comprise a plurality of user selectable aspects of the managed telecommunication network, and wherein the GUI is configured such that the user may choose which aspects should be used to generate at least one of the reference view and the overlay view, by teaching that the user may vary the display by

Art Unit: 2173

choosing the static, levels, geography, topography, time, aggregation, and color

*[Section III, pages 19-20].*

4-17. Regarding claim 37, Becker anticipates the claim of the tool wherein the overlay view is displayed in relief relative to the reference view, by teaching that the user may vary the color and thickness of lines *[Section III, page 20, "Size"]*. Thus, the links would show up in relief to the reference view *[figure 7]*.

4-18. Regarding claim 38, Becker anticipates the claim of the tool wherein the reference view is a view of a base model representation of a network layout containing information about network devices and attributes of the network devices, by teaching that the color may be used to encode statistic values on the display *[Section III, page 20, "Color"]*. The base model representation may be the links that contain only certain attributes or that may be in a certain geographical location. Thus, the reference view contains information and attributes of the network devices represented by the nodes.

4-19. Regarding claims 39-41, Becker anticipates the claim of the tool wherein the base model representation is generated from a network information set containing complete information about the underlying telecommunication network, because the base information set would inherently need to be complete, in the sense that it contains all the information necessary to display all the variations based on the parameters selected, in order to allow for the modification on each parameter within the display.

Becker anticipates the claim of the tool wherein the base model representation represents less than all of the information contained in the network information set, by teaching that the user can modify the statistics, levels, geography, topography, time, aggregation, and color to change the display [*Section III, pages 19-20*].

4-20. Regarding claim 42, Becker anticipates the claim of the tool wherein the network information set comprises physical topography information associated with network elements on the telecommunication network, by teaching topography as one of the parameters [*Section III, page 19, "Geography/Topology"*].

Becker anticipates the network information set comprising logical interconnection information, status information, and performance attributes associated with the telecommunication network, by teaching that the links on the map represent a statistic being displayed [*figure 7*]. Statistics may be raw data or summaries. Link statistics may be directed, as in call flow of a circuit-switched network, or undirected, as in the network's capacity [*Section I, page 16, paragraph 4*].

#### **Claims 44, 46**

4-21. Regarding claim 44, Becker anticipates the claim of the method for presenting a visual representation of a telecommunication network layout comprising the step of obtaining an information set containing information relevant to the telecommunication network layout, because the base information set would inherently need to contain all

Art Unit: 2173

the information necessary to display all the variations based on the parameters selected, in order to allow for the modification on each parameter within the display.

Becker anticipates the method comprising the step of generating a representation of at least a portion of the information set, said representation having a background image portion indicative of at least a first aspect of the telecommunication network layout, said background image being derived from at least a first data subset of the information set and representing at least a portion of a physical network topology of the telecommunication network layout, by teaching a graphical tool called SeeNet, that visualizes network data using static displays, interactive controls, and animation [Section I, page 16, paragraph 7, lines 1-3]. [Figure 7] shows the percentage of idle network capacity into and out of one node near Chicago using SeeNet. As shown, a map of the U.S is displayed in the background along with nodes and links on the map.

Becker teaches said representation having a foreground image indicative of at least a second aspect of the telecommunication network layout, said foreground image being user-selectable and derived from at least a second data subset of the information set, by disclosing that in addition, links with a high percentage of idle capacity (red) are shown above those with a lower percentage of idle capacity. Hence, the higher percentage links are shown in the foreground, and the lower percentage ones, in the background. The user is allowed to adjust the colors representing the links on the display and thus, would have the ability to choose which links would be in the foreground [Section III, page 20, paragraph 4].

Becker teaches said foreground image including a management view of the telecommunication network, by disclosing that users can select specific nodes for viewing as well as choose which links would be in the foreground [*Section III, page 20, paragraphs 4, 6*]. Thus, the foreground image representation comprises a management view where users can manage the nodes and links being viewed.

4-22. Regarding claim 46, Becker anticipates the claim of the method wherein at least one of the first and second data subsets are user selectable to enable a user to control the appearance of at least one of the foreground image and background image, by teaching that the user may vary the statistic, levels, geography, topography, time, aggregation, and color parameters of the display [*Section III, page 19-20*]. By varying these parameters, the user can control which links are shown in the foreground and which are shown in the background.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker et al (March 1995) and Bishop et al (U.S. Patent No. 5,729,250).

6-1. Regarding claim 43, Becker teaches the invention substantially as claimed. See section 4-15. Becker does not expressly teach using a display that is touch sensitive and acts as an input device. Bishop teaches that an advantage of a touch screen is that an operator may simply touch a display object or portion of the display screen to select, highlight, or otherwise input information [*column 1, lines 30-33*]. Thus, no intermediate device such as a mouse is required.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the graphical tool of Becker, the touch sensitive display as taught by Bishop. This would allow the operator to simply touch a display object or portion of the display screen to select, highlight, or otherwise input information and thus, eliminating the need for an intermediate device such as a mouse.

7. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker et al (March 1995) and Cox et al (November 1996).

7-1. Regarding claim 45, Becker teaches the invention substantially as claimed. See section 4-21. Becker further teaches that the user may vary the color of links to highlight important data (Section III, page 20, "Color"). Becker does not expressly teach the claim of the method wherein the background image is presented in a dilute color format and wherein the foreground image is presented in a saturated color format. Cox teaches a similar graphical tool for displaying a network layout that positions nodes geographically

on a globe and draws lines or arcs among them [*section 2.1, paragraph 1, lines 1-2*].

“The color and thickness of lines may be used to represent the traffic, with the thicker and brighter lines showing the links carrying the most traffic, with the greatest capacity, and so forth” [*section 1, paragraph 7, lines 6-9*]. Thus, the lines between the nodes that carry little traffic may be represented by a dilute color and the lines that carry a lot of traffic may be represented by a more saturated color.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the graphical tool of Becker, being able to modify the brightness of the colors representing the links, as taught by Cox. This would allow the user to better represent the statistic being shown in the network display.

### ***Response to Arguments***

8. The Examiner acknowledges the Applicants' amendments to claims 21, 23, 29, 35, and 44. Regarding claims 21, 35, and 44, the Applicants allege that Becker et al (March 1995) as described in the previous Office action, does not explicitly teach “the display of a physical network topology as that term is defined in the application”.

Contrary to Applicants' arguments, Becker teaches a background image of the United States and the location of the nodes and links with respect to the background image [figure 7] as the physical network topology. Applicants allege that Becker as described in the previous Office action, does not explicitly teach “a system in which a management view may be displayed over a physical network topology”. Contrary to Applicants' arguments, Becker teaches that in addition to the physical topology containing the map,

Art Unit: 2173

location, and links of nodes in the network, a foreground image representation of links containing certain properties such as links with a high percentage of idle capacity (red), are shown above those with a lower percentage of idle capacity. Hence, the higher percentage links are shown in the foreground, and the lower percentage ones, in the background. The user is allowed to adjust the colors representing the links on the display and thus, would have the ability to choose which links would be in the foreground [Section III, page 20, paragraph 4]. Thus, users can manage the foreground view of the network. Consequently, and given the broadest, most reasonable interpretation of their claim language, Becker is still considered to anticipate claims 21, 35, and 44.

Regarding claim 28, Applicants allege that Becker as described in the previous Office action, does not explicitly teach “a system in which a management view may be presented over a grayed out view of the physical network topology”. Contrary to Applicants’ arguments, Becker teaches that the background image representation includes the map of the United States and the location of the nodes and links with respect to the background image [figure 7]. Additionally, those links not containing a certain aspect of the network, such as links falling within a threshold value, may also be part of the background image representation. The foreground image representation contains those links that fall within the threshold value defined by a user, and would appear in the foreground. As shown in [figure 7], links having the lowest percentage of idle capacity are shown in gray to represent that they do not fall within the threshold value selected by the user. Consequently, and given the broadest, most reasonable



Art Unit: 2173

interpretation of their claim language, Becker is still considered to anticipate claims 28, 35, and 44.

Applicant states that dependent claims 22-34, 36-43, 45, and 46 recite all the limitations of the independent claims, and thus, are allowable in view of the remarks set forth regarding independently amended claims 21, 35, and 44. However, as discussed above, Becker is considered to teach claims 21, 35, and 44, and consequently, claims 22-34, 36-43, 45, and 46 are rejected.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin H. Tan whose telephone number is 571-272-8595.

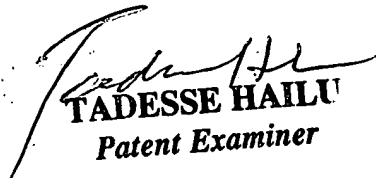
Art Unit: 2173

The examiner can normally be reached on Mon-Thu 9:30-7 and alternating Fridays 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on 571-272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHT  
Assistant Examiner  
Art Unit 2173

  
**TADESSE HAILU**  
*Patent Examiner*